

**What is claimed is:**

1. An isolated antibody or antibody fragment thereof which comprises an antigen -binding domain of a human antibody specific for human TGF $\beta$ .
2. An antibody or antibody fragment thereof according to claim 1 which is in the form of scFv.
3. An antibody or antibody fragment thereof according to claim 1 which is in the form of a whole antibody.
4. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises part or all of a VH domain encoded by a germ line gene segment or a rearranged gene segment.
5. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises part or all of either a VL kappa domain or a VL lambda domain.
6. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VH domain consisting of the amino acid sequence as shown in any one of Fig. 1(a)(i) to (iv) (SEQ ID NOS: 8, 111, 112 and 10) or Fig. 1(c)(i) (SEQ ID NO: 12).

7. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VL domain consisting of the amino acid sequence as shown in any one of Fig. 1(a)(v) (SEQ ID NO: 14) or Fig. 1(b) (SEQ ID NOS: 16 and 18).

8. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VH domain consisting of the amino acid sequence as shown in any one of Fig. 2(a)(i) to (iii) (SEQ ID NOS: 6, 37 and 116), (v) (SEQ ID NO: 120), and (vi) (SEQ ID NO: 122).

9. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VL domain consisting of the amino acid sequence as shown in any one of Fig. 2(a)(iv) (SEQ ID NO: 118) or Fig. 2(b)(i) to (vi) (SEQ ID NOS: 39, 41, 43, 45, 47, 124).

10. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VL domain consisting of the amino acid sequence as shown in Fig. 4 (SEQ ID NO: 49).

11. An antibody or antibody fragment thereof according to claim 1 wherein the antigen-binding domain comprises a VL domain encoded by the nucleotide sequence as shown in Fig. 4 (SEQ ID NO: 48).

12. A polypeptide with a binding domain specific for TGF $\beta$  which polypeptide comprises an amino acid sequence as shown in any one of Fig. 1(a) (SEQ ID NOS: 8, 111, 112, 10, 14), Fig. 1(b) (SEQ ID NOS: 16 and 18), Fig. 1(c) (SEQ ID NO: 12), Fig. 2(a) (SEQ ID NOS: 6, 37, 116, 118, 120 and 122), Fig. 2(b) (SEQ ID NOS: 39, 41, 43, 45, 47, 124), and Fig. 4 (SEQ ID NO: 49).

13. An isolated antibody or antibody fragment thereof comprising an antigen-binding domain of a human antibody specific for human TGF  $\beta$ , said antigen-binding domain comprising the VH domain 6H1 VH of which the amino acid sequence is shown in Figure 2(a)(i) (SEQ ID NO: 6).

14. An antibody or antibody fragment thereof according to claim 13 which is in the form of scFv.

15. An antibody or antibody fragment thereof according to claim 13 which is in the form of a whole antibody.

16. An antibody or antibody fragment thereof according to claim 13 wherein said antigen-binding domain of a human antibody comprises a VL domain selected from 6B1 VL, of which the amino acid sequence is shown in Figure 2(b)(iii) (SEQ ID NO: 43), 6H1 VL, of which the amino acid sequence is shown in Figure 2(b)(vi) (SEQ ID NO: 124), and 6A5 VL, of which the amino acid sequence is shown in Figure 2(b)(ii) (SEQ ID NO: 41).

17. An antibody or antibody fragment thereof according to claim 16 which is in the form of scFv.

18. An antibody or antibody fragment thereof according to claim 16 which is in the form of a whole antibody.

19. An isolated antibody or antibody fragment thereof comprising an antigen-binding domain of a human antibody specific for human TGF $\beta$ , said antigen-binding domain of a human antibody comprising the VH domain 6H1 VH of which the amino acid sequence is shown in Figure 2(a)(i) (SEQ ID NO: 6) and the VL domain 6B1 VL, of which the amino acid sequence is shown in Figure 2(b)(iii) (SEQ ID NO: 43).

20. An antibody or antibody fragment thereof according to claim 19 which is in the form of scFv.

21. An antibody or antibody fragment thereof according to claim 19 which is in the form of a whole antibody.

22. A composition which comprises an antibody or antibody fragment thereof, according to claim 13 and an excipient.

23. A composition which comprises an antibody or antibody fragment thereof, according to claim 19 and an excipient.

24. A specific binding member comprising a human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, wherein said human antibody antigen binding domain comprises a VH domain which has the amino acid sequence shown in Figure 1 (a) (i) (SEQ ID NO: 8).
25. A specific binding member comprising a human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, wherein said human antigen binding domain comprises a VL domain which has the amino acid sequence shown in Figure 14 (SEQ ID NO: 59).
26. A specific binding member comprising a human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, wherein said human antibody antigen binding domain comprises a pairing of a VH domain and a VL domain selected from:
- (a) 1B2 VH, of which the amino acid sequence is shown in Figure 1 (a) (i) (SEQ ID NO: 8), and 7A3 VL, of which the amino acid sequence is shown in Figure 1 (b) (i) (SEQ ID NO: 16);

(b) 31G9 VH, of which the amino acid sequence is shown in Figure 1 (a) (iv) (SEQ ID NO: 10), and 31G9 VL, of which the amino acid sequence is shown in Figure 1 (a) (v) (SEQ ID NO: 14); and

(c) 27C1 VH, of which the amino acid sequence is shown in Figure 1 (c) (i) (SEQ ID NO: 12), and 10A6 VL, of which the amino acid sequence is shown in Figure 1 (b) (ii) (SEQ ID NO: 18).

27. A specific binding member according to claim 18 wherein said human antibody antigen binding domain comprises a VH domain 27C1 VH, of which the amino acid sequence is shown in Figure 1 (c) (i) (SEQ ID NO: 12), and the VL domain 10A6 VL, of which the amino acid sequence is shown in Figure 1 (b) (ii) (SEQ ID NO: 18).

28. A specific binding member comprising a human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, wherein said human antibody antigen binding domain comprises a VH domain which comprises a CDR3 with an amino acid sequence selected from those shown in Figure 3 (SEQ ID NOS: 19-35).

29. A specific binding member according to claim 20 wherein said CDR3 has the sequence shown for CDR3 of 27C1 VH (SEQ ID NO: 12).
30. A specific binding member comprising a human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, wherein said human antibody antigen binding domain comprises the 31 G9 VH domain of which the amino acid sequences is shown in Figure 1 (a) (iv) (SEQ ID NO: 10) and the CS37 VL of which the sequence is shown in Figure 14 (SEQ ID NO: 59).
31. A specific binding member which is a first specific binding member comprising a first human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1,
- wherein said first specific binding member competes for binding to TGF $\beta$ 1 with a second specific binding member comprising a second human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1,

wherein said second human antibody antigen binding domain comprises a pairing of a VH domain and a VL domain selected from:

- (a) 1 B2 VH, of which the amino acid sequence is shown in Figure 1 (a) (i) (SEQ ID NO: 8), and 7A3 VL, of which the amino acid sequence is shown in Figure 1 (b) (i) (SEQ ID NO: 16);
  - (b) 31G9 VH, of which the amino acid sequence is shown in Figure 1(a) (iv) (SEQ ID NO: 10), and 31G9 VL, of which the amino acid sequence is shown in Figure 1 (a) (v) (SEQ ID NO: 14); and
  - (c) 27C1 VH, of which the amino acid sequence is shown in Figure 1 (c) (i) (SEQ ID NO: 12), and the VL domain 10A6 VL, of which the amino acid sequence is shown in Figure 1 (b) (ii) (SEQ ID NO: 18).
32. A first specific binding member according to claim 23, wherein said second human antibody antigen binding domain comprises the VH domain 27C1 VH, of which the amino acid sequence is shown in Figure 1 (c) (i) (SEQ ID NO: 12), and the VL domain 10A6 VL, of which the amino acid sequence is shown in Figure 1 (b) (ii) (SEQ ID NO: 18).
33. A specific binding member which is a first specific binding member comprising a first human antibody



antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, and

wherein said first specific binding member competes for binding to TGF $\beta$ 1 with a second specific binding member comprising a second human antibody antigen binding domain specific for human TGF $\beta$  isoform TGF $\beta$ 1 which binds TGF $\beta$ 1 preferentially over TGF $\beta$ 3 and which neutralizes TGF $\beta$ 1, and

wherein said second human antibody antigen binding domain comprises the 31 G9 VH domain of which the sequence is shown in Figure 1 (a) (iv) (SEQ ID NO: 10) and the CS37 VL of which the sequence is shown in Figure 14 (SEQ ID NO: 59).

34. A specific binding member as in any one of claims 16, 17, 18, 20, 22, 23, or 25 comprising a single-chain Fv antibody molecule.
35. A specific binding member as in any one of claims 16, 17, 18, 20, 22, 23, or 25 which comprises one or more amino acids in addition to those forming said human antibody antigen binding domain.
36. A specific binding member according to claim 31 comprising an antibody constant region.

37. A specific binding member according to claim 32 which comprises a whole antibody.
38. A specific binding member according to claim 32 wherein said antibody constant region is IgG4 isotype.
39. A pharmaceutical composition comprising a specific binding member as in any one of claims 16, 17, 18, 20, 22, 23, or 25 and a pharmaceutically acceptable excipient.